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ABSTRACT

A study investigated the effects of teacher nonverbal immediacy and strategy type on college students' likelihood of resisting teacher strategies for gaining compliance. Subjects were 629 undergraduate students randomly assigned to four separate conditions. They responded to four written scenarios that reflected the variables of teacher immediacy (immediate and nonimmediate) and behavior alteration strategy (prosocial or antisocial). Results indicated that the relative effectiveness of a prosocial or antisocial strategy type may be contingent on teachers' nonverbal immediacy. Specifically, students reported greater likelihood of resistance to those strategies which were asynchronous with teacher immediacy. An immediate teacher who employed prosocial strategies was resisted less than an immediate teacher who used antisocial techniques. Conversely, a nonimmediate teacher who employed prosocial techniques was resisted more than a nonimmediate teacher who used antisocial strategies. Based on these results, immediate teachers should probably continue to employ prosocial techniques for compliance, but nonimmediate teachers should avoid the use of prosocial strategies. Extended research should consider additional student behaviors and techniques representative of prosocial and antisocial types as well as the influence of other situational or relational factors on potential student resistance. Seven pages of references are included. The four scenarios are described in Table 1 (appended). (SRT)

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Effects of Teacher Immediacy and Strategy Type on College Student Resistance

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Running Head: RESISTANCE

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Abstract

This study investigated the effects of teacher nonverbal immediacy and strategy type on college students' likelihood of resisting teacher compliance-gaining attempts. Employing a 2 X 2 design, students were asked to indicate their likelihood of complying to teacher demands in one of the following scenarios: An immediate teacher who used prosocial (or antisocial) behavior alteration techniques; a nonimmediate teacher who used either strategy type. Predicting an interaction, results confirmed that students were less likely to resist an immediate teacher who employed prosocial techniques, but more likely to resist an immediate teacher who used antisocial techniques. In contrast, students reported greater resistance to a nonimmediate teacher employing prosocial techniques, but less resistance to a nonimmediate teacher who used antisocial techniques. Students' locus of control, gender, and class ranking were nonsignificant covariates. Findings were interpreted in terms of the interaction and the overwhelming influence of teacher nonverbal immediacy on students' decisions to resist or comply.

Effects of Teacher Immediacy and Strategy Type on College Student Resistance

Teachers' nonverbal immediacy has been linked repeatedly to student's affective learning in the classroom. Guided by the immediacy principle that "people are drawn toward persons and things that they like, evaluate highly, and prefer; and they avoid or move away from things they dislike, evaluate negatively, or do not prefer" (Mehrabian, 1971, p. 1), researchers have consistently identified immediate teachers to be associated with positive student affect (Andersen, 1979; Andersen, Norton, & Nussbaum, 1981; Kearney, Plax, & Wendt-Wasco, 1985; Rodgers & McCroskey, 1984). Students report that immediate teachers like them or evaluate them highly. In turn, students predictably reciprocate positive affect toward their more immediate instructors. In other words, nonverbal immediacy cues are a valid and reliable indicator of a communicator's affect (Mehrabian, 1967).

Moreover, the particular strategies or Behavior Alteration Techniques employed to gain student compliance are associated with students' affect as well. In a number of studies students reported higher evaluations of teachers who communicated positive, prosocial reasons for compliance as opposed to those teachers who relied on punishment-based, antisocial techniques (McCroskey, Richmond, Plax, & Kearney, 1985; Plax, Kearney, McCroskey, & Richmond, 1986). These researchers concluded that students interpret teachers' verbal messages of control as an indicator of either positive or negative affect.

From a classroom management perspective, however, gaining affect is secondary to gaining students' on-task compliance. Recognizing that students' academic engagement time is the single best predictor of

cognitive learning (Denham & Lieberman, 1980; McGarity & Butts, 1984; Rosenshine, 1979; Samuels & Turnure, 1974; Woolfolk & McCune-Nicholich, 1984), effective classroom managers are responsible for eliciting and maintaining students' on-task behaviors (Emmer & Evertson, 1981). Even though a number of theorists argue that postive student affect should promote on-task compliance or increased cognitive learning (Woolfolk & McCune-Nicolich, 1984), several studies point to discrepancies in this presumed relationship. For instance, Peck and Veldman (1973) found that teachers who were rated the least interesting or pleasant were those who were most successful in promoting student cognitive learning. Similarly, Abrami, Perry and Levanthal (1982) reported that the most popular teachers were not those who helped students learn more. Consequently, we cannot readily assume that those variables which promote student affect will also be associated with student on-task compliance.

Of primary concern to this investigation was the interaction between teacher nonverbal affect-gaining behaviors and verbal compliance-gaining strategies on students' reported resistance. Manipulating levels of teacher immediacy (immediate vs. nonimmediate) and strategy type (prosocial vs. antisocial behavior alteration techniques), this project was designed to investigate students' likelihood of resistance to college teacher demands of on-task compliance. Important to explaining this effect, the following review explicates the role of nonverbal, relational messages in the assignment of meaning to verbal, content messages in communication exchanges. Moreover, an examination of student expectations of teacher consistency as well as perceptions of differential bases of power provide the

reasoning behind students' reactions to inconsistent verbal and nonverbal messages of affective approach or avoidance.

Nonverbal messages serve to define the nature of the interpersonal relationship between communicators (Watzwalick, Beavin, & Jackson, 1967). Relational messages not only assist in the interpretation of the verbal or content messages exchanged, but also guide communicators' decisions about subsequent conduct within the relationship (Burgoon, Buller, Hale, and deTurck, 1984, p. 351). Defined as physical or psychological closeness, nonverbal immediacy signals relational perceptions of approach, friendliness, warmth, and interpersonal closeness. In contrast, nonimmediacy communicates avoidance, dislike, coldness and interpersonal distance. Andersen, Andersen and Jensen (1979) identified the following nonverbal behaviors as indicative of immediacy: Positive head nods, smiles, eye contact, vocal expressiveness, overall body movements and purposeful gestures, direct, relaxed and open body positions, and close physical distances. Validating the relational interpretation of immediacy behaviors, Burgoon et al. (1984) found that a number of immediacy cues (proxemic distance, smiling, and eye contact) were important determinants of observers' perceptions of conversants' interpersonal closeness.

Without exception, the research on teacher immediacy and student affect has demonstrated a substantial, positive association. These results have been replicated in secondary and college classes (Andersen, 1979; Andersen, Norton & Nussbaum, 1981; Kearney, Plax, Wendt-Wasco, 1984; McDowell, McDowell & Hyerdahl, 1980, Plax, Kearney, McCroskey & Richmond, 1986; Rodgers & McCroskey, 1984), across divergent course content (Kearney et al., 1985), and in modified mastery and traditional course structures (Andersen, 1979; Kearney et al., 1985). Not only do

students indicate liking teachers who are more immediate, but they also report that immediate teachers like them as well (Chaiken, Gillen, Derlega, Heinen & Wilson, 1978). Consequently, teachers who have positive feelings about their students are more likely to be immediate and in turn, students are more likely to respond reciprocally to those teachers (Plax et al., 1986).

Reciprocity should be reflected in students' willingness to comply or resist immediate or nonimmediate teachers' attempts to gain student on-task compliance. While the immediacy/compliance or resistance relationship has not been examined directly, researchers have reported that particular nonverbal immediacy cues are more likely to positively affect students' cognitive learning (Driscoll, 1978; Kaufman, 1975; Richmond, Gorham, & McCroskey, 1986), recall, attentiveness, and involvement in classroom activities (Bettencourt, Gillet, Gall, & Hull, 1983; Otteson & Otteson, 1980). Woolfolk & Brooks (1985) further speculate that teachers' nonverbal behaviors may play a major role in establishing and maintaining student cooperation in the classroom. Finding that teacher verbal and nonverbal cues of disapproval were associated with higher rates of student off-task behaviors, Nafpaktitis, Mayer, and Butterworth (1985) concluded that approval behaviors of head nodding, smiling, and touching appear to operate as reinforcers of on-task behaviors. To reinterpret, teacher immediacy cues signal to students that on-task compliance is expected and valued in their affectively-based relationship.

At this point, we might conclude that immediate teachers will be resisted less than nonimmediate teachers. Further evidence suggests that a main effect for strategy use is also warranted. That is, both elementary and secondary teachers report that prosocial techniques are

more effective than antisocial techniques at gaining student compliance (Kearney, Plax, Richmond, & McCroskey, 1984, 1985). Similarly, college students reported a greater likelihood of resistance to teachers' use of antisocial strategies (Plax, Kearney, Downs, & Stewart, in press). However, verbal messages of control may be mediated by teachers' nonverbal relational messages of immediacy or nonimmediacy. Both college and secondary students' reports of their teachers' immediacy and behavior alteration technique use confirmed this mediational effect, at least for students' affect (Plax et al., 1986). Specifically, teacher strategy use was found to be indirectly related to affect as a function of student perceptions of teacher immediacy (Plax et al., 1986).

Finding that immediacy was a better predictor of students' affect than strategy type (Plax et al., 1986), these researchers also noted that students perceived their more immediate teachers to employ primarily prosocial behavioral alteration techniques. In contrast, their more nonimmediate teachers were perceived to rely on antisocial techniques. Consistent with nonverbal relational cues of positive affect, immediate teachers may be more prone to verbalize compliance expectancies that communicate prosocial, rewarding consequences to on-task compliance. Similarly, nonimmediate teachers who nonverbally signal negative affect toward students may be more likely to rely on punishment or antisocial strategies in their attempts to gain control. Synchronous verbal and nonverbal messages of either positive or negative affect then, should lead to student reciprocity in their response orientations toward teacher demands. As a result, immediate teachers who employ prosocial strategies may be more likely to gain student compliance, whereas, nonimmediate teachers who use antisocial techniques may be more likely to gain student resistance.

Extending this explanation, it is reasonable to argue that immediate and nonimmediate teachers occasionally communicate inconsistent strategies for control. Teachers may alter their reliance on a particular strategy type when faced with a potentially difficult student, situation, or ideosyncratic mood changes (O'Hagan & Edmunds, 1982). Taking into account that teachers' nonverbal immediacy or nonimmediacy provides the "historical framework" for interpreting a particular message of control (Plax et al., 1986), students may be predisposed to maintain their overall compliance or resistance orientation, regardless of strategy type employed. However, when expected expressions of immediacy (based on a history of experiences) are disrupted with verbal statements of nonimmediacy (the use of antisocial verbal compliance messages), resistance may result. We argue then, that asynchronous verbal and nonverbal messages will prompt a resistance response.

Reasoning that some adjustment or change might be expected any time a deviant expression of immediacy is encountered (Patterson, 1973), students may react to immediacy violations by resisting teacher demands. This logic is a direct corrolary to the mandate for teacher consistency evidenced in almost every book or pamphlet on classroom management and discipline (Emmer, Evertson, Sanford, Clements, & Worsham, 1984; Evertson, Emmer, Clements, Sanford, & Worsham, 1984; Woolfolk & McCune-Nicolich, 1984). In explanation, teacher consistency provides students with reliable expectations of teacher behavior. As a result, students learn to depend on predictable teacher responses to regulate their own behavior (Weber, Crawford, Roff, & Robinson, 1983). Validating this position, the consistent application of classroom management strategies has been shown to discriminate effective from

ineffective teachers (Emmer et al., 1984; Evertson et al., 1984; Woolfolk & McCune-Nicolich, 1984). In the context of the present investigation, expectations of consistency can be arguably applied to verbal and nonverbal messages of compliance. Expecting prosocial compliance-gaining messages from immediate teachers and antisocial strategies from nonimmediate teachers, expectancy violations may prompt student distancing and subsequent adaptations in the form of resistance.

A resistance response to asynchronous messages of control can be further explained by examining students' perceptions of the immediate and nonimmediate teachers' differential bases of power. Understanding that power is a relational variable, students must perceive that the teacher has the power to influence in order to gain compliance (Kearney et al., 1984; McCroskey & Richmond, 1983; Raven & Kuglanski, 1970; Richmond & McCroskey, 1984). Recognizing that immediate teachers have established postive affective relationships with their students, students may perceive them to have greater reward potential. Asynchronous strategies of punishment, then, may be interpreted as less valid and consequently, unacceptable. Conversely, the negative affect associated with nonimmediate teachers may lead students to conclude that the only basis of power that has any influence potential is legitimate-based. Any attempts to employ reward-based strategies are rendered meaningless. By example, nonimmediate teachers who seek to gain compliance by asserting that the students "will feel good about themselves" or "they'll find it a rewarding/interesting experience" are likely to trigger in their students serious doubt. Moreover, such distrust may lead students to conclude that sarcasm or ridicule underscores the verbal intent.

Based on this reasoning, we argue that immediate teachers overall,

are likely to be met with less student resistance than nonimmediate teachers. With immediacy held constant, the use of prosocial strategies should be more effective (i.e., less resistance) than antisocial strategies. However, the use of verbal strategies that are asynchronous with teachers' immediacy or nonimmediacy orientation may prompt more student resistance than the use of verbal strategies that are synchronous with teachers' nonverbal immediacy. Positing this interaction effect on students' resistance, the following hypothesis was generated:

> There will be a significant interaction between college teacher immediacy and strategy use on students' likelihood of resistance such that immediate teachers will be resisted <u>less</u> when employing prosocial as opposed to antisocial strategies, but nonimmediate teachers will be resisted <u>more</u> when using prosocial as opposed to antisocial messages.

Understanding students' differential responses to teacher compliance-gaining attempts may also require an examination of relevant student characteristics. A number of studies suggest that resistance may be influenced by students' locus of control. Defined as a dispositional construct, locus of control distinguishes people on the basis of perceived control (Lefcourt, 1982; Rotter, 1966). Because compliance is dependent on students' perceptions that the teacher has influence potential (McCroskey & Richmond, 1983; Wheeless, Barraclough, & Stewart, 1983), externals, or those students who rely on "powerful others" (teachers) for control, may be more compliant overall than internals or those who depend on self for control. In addition, we might suspect that externals will indicate greater compliance with

prosocial or reward-based strategies (Getter, 1966; Strickland, 1970) and with immediate teachers or those agents with whom they have established positive personal relationships (Wheeless et al., 1983). Examining college students' recall of teacher strategy use in the classroom, Stewart, Kearney and Plax (1985) found that externals perceived their teachers to employ significantly more control than did internals. However, these same researchers reported that locus of control failed to be a significant mediator of students' likelihood of resistance to either pro or antisocial strategy type.

Other research indicates that perceptions of teacher behavior are influenced by students' gender and year in school (Milgram, 1979; Weinstein, Marshall, Brattesani, & Middlestadt, 1982; Weinstein, 1983). Stereotyped as more responsive and potentially less assertive than males (Bem, 1974; Wheeless & Dierks-Stewart, 1981), we might expect females to be more compliant. Finding that college freshmen report difficulty adjusting to the self-discipline required for academic success (Nichols, 1980), we might also suspect class ranking to influence compliance or resistance tendencies. However, Stewart et al. (1985) found that neither student characteristic contributed meaningfully to college students' perceptions of either strategy use or resistance.

The lack of empirical clarity in the literature on the impact of locus of control, gender and year in school on students' resistance toward teacher compliance attempts prompted the following research question:

> Do locus of control, gender and year in school covary with college students' resistance toward the pro/anti-social compliance-gaining attempts of immediate/non-immediate teachers?

Methods

Subjects

Subjects were 629 (females = 251, males = 342, 36 who did not indicate) undergraduate students enrolled in introductory communication classes at a large Western university. Class sizes ranged from 25 to 45 students. The overall mean for year in college was 2.1 with 35% freshmen; 31% sophomores; 17% juniors; 13% seniors; and 5% who did not indicate. Courses sampled fulfilled general education requirements across the university and therefore, students represented a diversity of major fields.

Procedures

Four treatment conditions were created to assess students' reactions to a particular college teacher scenario. In order to avoid having intact classes within any cell, treatments were randomly assigned within classes so that a relatively equal number of students responded to the four separate conditions across classes. Consequently, students responding to treatment 1 were 136; 145 to treatment 2; 135 to treatment 3; and 144 to treatment 4. Students completed two packets of materials. To minimize fatigue and test sensitization, the packets were administered on two different occasions. The first packet included 1) one of the four teacher scenarios, 2) an assessment of how willing students would be to comply with the teacher's request, 3) an assessment of students' perceptions of the teacher's immediacy in the scenario, and 4) an assessment of students' perceptions of the pro- or antisocialness of the Behavior Alteration Messages employed by the teacher in the particular scenario. (Assessments 3 and 4 provided data for treatment checks). In responding to a specific scenario, students were asked to

"imagine yourself in the following situation."[1] The first packet was distributed within the first two weeks of the semester so that responses would not be confounded by the teacher's behavior in the class where the data were being collected. Students were told that the purpose of the study was to examine teachers' use of classroom management techniques.

The second packet was distributed within one month of the first. This second packet included assessments of student sex, year in college, and students' locus of control orientation. Code numbers were employed to match the first and second questionnaires. In accordance with the Human Subjects Committee requirements, students were assured that their participation was voluntary and responses would remain anonymous.

Stimulus Materials

The four written scenarios reflected the variables of teacher immediacy (immediate and nonimmediate) and behavior alteration messages (prosocial BAMs and antisocial BAMs). Taken together, the combination of variables resulted in the creation of four different treatment scenarios: 1) An immediate college teacher employing prosocial BAMs in an attempt to stimulate student on-task compliance; 2) An immediate teacher employing antisocial BAMs; 3) A nonimmediate teacher employing prosocial BAMs; and 4) a nonimmediate teacher employing antisocial BAMs.

To stimulate perceptions of immediate and nonimmediate teachers, scenarios were written to include nonverbal immediacy cues drawn from the Behavior Immediacy Index and the Generalized Immediacy Index (Andersen, 1979). These specific immediacy behaviors have been validated in a number of investigations (Andersen, 1979; Andersen et al., 1979; Burgoon et al., 1984; Mehrabian, 1967). Two pro and two antisocial BAMs were imbedded in each of the appropriate scenarios. BAMs were selected to represent those Behavior Alteration Techniques

(BATs) which reflect pro and antisocial strategies (Kearney et al., 1984, 1985; Plax et al., 1986). In addition, BATs were chosen that stimulated likelihood of resistance/compliance with college students (Plax et al., in press; Stewart et al., 1985). The two categories of prosocial BATs included were "Immediate Reward from Behavior" and "Deferred Reward"; the two antisocial BAT categories were "Punishment from Teacher" and "Legitimate Teacher Authority" (Kearney et al., 1984). Treatment checks were made to substantiate the immediacy/nonimmediacy and the pro/antisocial BAT conditions.

In order to minimize additional potential confounding effects, four criteria were considered when generating the scenarios. First, scenarios were based on a college student off-task behavior that teachers typically face in classroom management. Second, the specific misbehavior was typical of a routine, observable event from the student's point of view. Third, the off-task behavior was characteristic of those that interfere with teacher goals of eliciting cognitive learning. Fourth, the misbehavior was clearly presentable in a short scenario in order to faciliate ready comprehension.

Insert Table 1 about here

These particular criteria were met with the specific off-task problem of "consistently coming to class unprepared." Recognizing that the primary function of both classroom managers and BATs is to increase academic engagement time (McCroskey et al., 1985), consistently "coming to class unprepared" was an obvious operational definition of off-task behavior. Finally, no details were included in the scenarios which would type either students or teachers within the scenarios by sex, social class or

other status variables. These criteria were met through editing, and subsequently validated by several treatment checks. (See Table 1 for the resulting scenarios employed).

Measurement

College Student Resistance. Following each of the four treatment scenarios, students were asked, "How willing would you be to go along with this teacher's request by coming to class prepared from now on?" Because no instrument was available to measure college students' projected compliance/resistance, a 4-item semantic differential-type scale was generated. Employing a 1 - 7 response option (with 1=less resistance and 7=more resistance), students responded to the following scale: Willing-Unwilling, Improbable-Probable, Unlikely-Likely, and Would-Would Not. Factor analysis confirmed a single factor solution with all items loading above .80 on the first unrotated factor. Chronbach's alpha estimate of internal reliability was .94.

Locus of Control. Students' internal-external orientations were measured by Levenson's (1974) 24-item, Likert-type locus of control scale. In preference to other locus of control measures, the items on this scale (1) reference the individual respondent rather than people in general; (2) are responded to on an interval scale rather than a dichotomous, forced-choice scale typical of other locus of control measures; and (3) refer to specific social or personal situations as opposed to more global contexts (Levenson, 1974, 1981). Even though Levenson (1974) argued that the scale measures three dimensions of control (two dimensions of externality, powerful others and chance, and one dimension of internality), previous research employing this index failed to find three separate factors (Stewart et al., 1985). Consistent with the findings of Stewart et al. and Rotter's (1966)

original conceptualization of locus of control, a two-factor solution was obtained with factor one consisting of both types of externally-based locus of control items (Eigenvalue = 4.63, variance accounted for = 19%), while factor two was comprised of internally-based items (Eigenvalue = 1.88, variance accounted for = 27%). The obtained interfactor correlation was .25. Reflecting externally worded items so that higher scores indicated greater externality, alpha reliability was estimated at .78 with a sample mean of 57.1 and a standard deviation of 10.21.

Results

Treatment Checks

A series of checks were conducted during the generation and validation of the scenarios. First, adding to the final preinvestigation proofing and editing of the scenarios, a group of undergraduate students (N = 24) and a group of college teachers (N = 9) were asked to review each scenario, commenting on realism and applicability of each criterion employed in treatment construction. Reviewers were also asked to suggest any necessary revision. The final four scenarios represent the inclusion of suggestions and the consensual agreement among the reviewers.

Following this preliminary review process, a second check was conducted with an additional group of college students (N = 63). After reading each scenario, subjects were asked to respond to a 3-item semantic differential-type scale designed to assess "imaginability" of each situation. Employing a 1-7 response option, students responded to the following scale items 4 times: Believable-Unbelievable; Unlikely to Happen-Likely to Happen; Easy to Imagine-Hard to Imagine. Lower scores

indicated greater realism or imaginability. Chronbach's alpha estimate of internal reliability for each set was above .70. The obtained means for each scale confirmed the imaginability of each scenario (situation 1, $\overline{X}$ = 6.1 ; situation 2, $\overline{X}$ = 5.5; situation 3, $\overline{X}$ = 4.8; situation 4, $\overline{X}$ = 6.7).

Included in the first survey packet were assessments of college students' perceptions of teacher immediacy/nonimmediacy in the particular teacher portrayal as well as the perceived pro or antisocialness of the BAMs. Students were asked to respond to a 4-item semantic differential-type scale by indicating their perceptions of "the overall teaching style of this instructor" for each of the following items: Warm-Cold, Distant-Close, Withdrawn-Outgoing, and Open-Restrained. With 7 indicating greater immediacy and 1, nonimmediacy, a single factor solution was obtained with all items loading above .90 on the first unrotated factor. Chronbach's alpha estimate of internal reliability was .98.

Results of the teacher immediacy/nonimmediacy check confirmed a successful manipulation. A one-way ANOVA across the conditions was significant (F = 774.47, df = 3/556, eta^2= 61%, p < .0001). An examination of the means (possible range 4 - 28) revealed that teachers in both situations 1 (22.98) and 2 (24.5) were perceived as immediate, whereas teachers in situations 3 (7.8) and 4 (7.8) were perceived as nonimmediate.

For the pro/antisocial BAM assessments, students responded to a 4-item semantic differential-type scale by indicating their perceptions of "the strategies this teacher employed to get you to change your

behavior" for each of the following items: Helpful-Harmful, Positive-Negative, Destructive-Constructive, and Punishing-Rewarding. A score of 7 indicated antisocial and 1, prosocial. A single factor solution was obtained with all items loading above .90 on the first unrotated factor. Chronbach's alpha reliability was estimated at .94. Results of a one-way ANOVA across treatments revealed significant differences for strategy type (F = 158.96, df = 3/556, p = .0001, eta^2 = 46%). However, follow-up contrasts and an examination of the means suggested that students were unable to accurately differentiate antisocial from prosocial BAMs for situations 1 (immediate, antisocial = 16.48) and 4 (nonimmediate, prosocial = 16.17), but were able to differentiate for situations 2 (immediate, prosocial = 8.61) and 3 (nonimmediate, antisocial = 22.4), and situations 1 and 4 from situations 2 and 3.

Suspecting that perceptions of strategy type were influenced by the imbedded teacher immediacy or nonimmediacy treatment, a follow-up manipulation check was conducted with a separate sample of college students (N = 58) responding to the strategies in isolation. Employing the same scale items noted above, the result of a one-way ANOVA for repeated measures confirmed a clear separation of the pro and antisocial treatment messages (F = 816.1, df = 3/180 , p < .0001). The BAMs and their respective means were: Antisocial, "Because I told you to," 25.4; Antisocial, "I'll lower your grade if you don't", 25.4; Prosocial, "Because it will help you later on in life (or with upcoming assignments)," 6.6; and Prosocial, "You'll find it a rewarding and meaningful experience," 7.2. Consequently, the manipulated antisocial BAMs were significantly different from the prosocial BAMs.

Research Question and Hypothesis

The statistical model employed to test the hypothesis and research question was a regression-type 2 (teacher immediacy/nonimmediacy) X 2 (prosocial/antisocial BAMs) fixed effects analysis of covariance (ANCOVA) with college students' locus of control, student gender, and year in college as the three covariates. The criterion variable was college student resistance to teacher compliance attempts. Results indicated that student locus of control ($F < 1$, $df = 1/515$, $p > .05$), student gender ($F = 1.7$, $df = 1/515$, $p > .05$), and year in college ($F = 2.9$, $df = 1/515$, $p > .05$) were nonsignificant covariates. Therefore, these particular student variables do not appear to covary with student resistance to immediate and nonimmediate teachers' employment of either antisocial or prosocial BAMS.

In terms of the hypothesized disordinal interaction, the test of the 2-way effect was significant ($F = 9.21$, $df = 1/515$, $p < .01$, $eta^2 = 1\%$). Follow-up comparisons employing Tukey's test for unconfounded means (critical value for mean differences =.712; Cicchetti, 1972), indicated that student resistance for treatment 1 (immediate teacher/antisocial BAMs, resistance $\bar{X} = 8.5$) was significantly less than resistance to treatment 2 (immediate/prosocial, $\bar{X} = 7.7$), which in turn, was significantly less than treatment 3 (nonimmediate/antisocial, $\bar{X} = 13.36$), and then, significantly less than treatment 4 (nonimmediate/prosocial, $\bar{X} = 15.2$). Thus, the hypothesis was supported. Moreover, given the minimal amount of variance accounted for by the interaction, an examination was made of the main effects for immediacy ($F = 199.67$, $df = 1/515$, $p < .001$, $eta^2 = 27\%$) and strategy type ($F = 2.29$, $df = 1/515$, $p > .05$).

Although it is atypical to consider the main effects of an analysis that has produced a significant interaction, the magnitude of the immediacy variable was noteworthy. This effect falls within the range of results that Lubin (1961) argues as a condition where it is natural to consider the main effects even though a significant interaction is obtained. According to Lubin, "In such cases, the usual procedure is to substitute the interaction mean square for residual mean square in the F ratio formula, and interpret the result as usual....If the mean square for [a particular treatment effect] is significantly greater than the interaction mean square, then the treatment effect overrides the interaction and therefore must be significant" (p. 810). This procedure separates the interaction effect from the main effect, mediating an accurate estimate of the main effect. This procedure was completed and produced a significant immediacy effect ($F = 21.678$, $df = 1/515$, $p < .001$).

Additional Analyses

To further probe the meaningfulness of these results, a 4-group discriminant analysis was computed in which treatment condition served as the categorization variable and college student resistance as the classification variable. A significant discriminant function resulted (Wilks Lambda = .701, $\chi^2 = 197.884$, $df = 3$, $R = .55$, $p < .00001$). An adjusted estimate of correct classification into groups was 44% (prior probabilities were 25%). Huberty (1972) has shown that adjusted correct classification rates provide an approximate analogue to the percent of variance explained (e.g., R^2). Additional examination indicated the structure matrix[4] coefficient at the expected magnitude (.999) and in the appropriate direction. Group centroids by treatment group were: -.536, -.679, .449, .835, respectively.

Discussion

Prior research indicates that prosocial strategies are "effective", whereas antisocial strategies are "ineffective" at gaining student compliance in the classroom (Kearney et al., 1984, 1985). However, the results of this investigation suggest that the relative effectiveness of either strategy type may be contingent on teachers' nonverbal immediacy. Specifically, students reported greater likelihood of resistance to those strategies which were asynchronous with teacher immediacy. An immediate teacher who employed prosocial strategies was resisted less than an immediate teacher who used antisocial techniques. Conversely, a nonimmediate teacher who employed prosocial techniques was resisted more than a nonimmediate teacher who used antisocial strategies.

Anticipating consistency between teachers' nonverbal immediacy orientation and strategy type, Plax et al. (1986) found that students perceived their more immediate teachers to use primarily prosocial BATs and their more nonimmediate teachers to rely on antisocial BATs. Assuming replication of these results, we might advise immediate teachers to continue to employ prosocial techniques for control, but would recommend that nonimmediate teachers avoid the use of prosocial strategies. To interpret, students may perceive their more nonimmediate teachers' prosocial attempts to gain compliance as insincere. Claiming that "you'll find it a rewarding and meaningful experience" or that "it will help you later on in life," nonimmediate teachers may be perceived as communicating sarcasm or ridicule. Moreover, students may not assign reward-based power to nonimmediate teachers. Given the negative affect associated with nonimmediacy, students may not believe that such teachers can deliver on promises of rewarding consequences.

These results also suggest that students resist immediate teachers less. The magnitude of teacher immediacy, as opposed to the interaction effect, suggests that student resistance may be primarily a function of immediacy. Moreover, this interpretation is consistent with prior research on teacher immediacy and BAT use. That is, Plax et al. (1986) reported that college students' perceptions of BAT use were mediated by teachers' nonverbal immediacy orientation. In support of that finding, results of the treatment check revealed that students were unable to accurately differentiate each BAT type when presented within the context of the immediacy stimulus. In contrast, a separate sample of students who were exposed to each BAT type in isolation clearly classified each as either prosocial or antisocial. Consequently, a generalized approach or avoidance orientation appears to provide the framework for student perceptions of BAT type.

Tentatively then, we might conclude that immediate teachers who occasionally resort to antisocial means of control may be tolerated by their students. For nonimmediate teachers, however, greater student resistance can be expected regardless of strategy choice. Consequently, teachers should be oriented to focus primarily on those nonverbal immediacy cues that signal positive student affect. By establishing a "track record" of immediacy and affect, students may be predisposed to comply with teacher requests. Simply stated, students may be more willing to comply with teachers they like as opposed to teachers they don't.

While locus of control may be associated with student perceptions of the frequency with which teachers employ strategies in the classroom (Stewart et al., 1985), internality/externality does not appear to influence resistance to either immediate or nonimmediate teachers'

compliance-gaining attempts. Similarly, gender and year in school did not provoke differential responses to any of the treatment conditions. With regard to these particular student characteristics then, decisions to resist or comply are associated with teacher behaviors.

The results of this investigation should be interpreted within the context of four potential limitations. First, college students were asked to indicate their "likelihood" of compliance or resistance with particular teacher demands. While we argue that students are capable of accurately reporting their response tendencies, corresponding validation of actual compliance or resistance in the classroom is desirable. However, the presence of observers or video cameras may distort both teacher and student behavior[5] in terms of displays of actual off-task behaviors; teacher reluctance in selecting potentially inappropriate strategies to gain compliance; and capturing realistic student compliance or resistance reactions. Second, replication is needed. Future research should also examine secondary and elementary students' responses to synchronous and ascynchronous teacher immediacy orientations and particular strategies employed. Third, generalizability is limited to the particular behavioral target and BATs used in the present investigation. Extended research should consider additional student behaviors and techniques representative of prosocial and antisocial types. Finally, the influence of other situational or relational factors on potential student resistance (e.g., perceived rights to resist, relative benefits associated with resistance versus compliance) should be studied.

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Footnotes

[1]A variety of articles address both the internal and external validity associated with asking students to role-play hypothetical scenarios. Within the communication literature, deTurck (1985) is representative of the proponents of role-playing. Within educational research, examples of "protocols" or "case vignettes" are common. The primary point to be considered when creating protocols, vignettes or scenarios is maximizing the accuracy of a behavioral portrayal. In other words, substantiating the imaginability of a portrayal is critical to both the internal and external validity of an investigation. Meeting a carefully defined set of criteria coupled with a series of treatment checks evidenced the success in achieving the necessary refinement of our four treatment scenarios and thus, added to the validity of our research design.

[2]Power estimates for all effects within the ANCOVA model, assuming a medium effect size at alpha = .05, were .995.

[3]Additional analyses were computed between the three covariates and perceptions of teacher immediacy and pro/antisocialness of BAMs within and across treatments. Results are available from the senior author upon request.

[4]The discriminant structure matrix shows the correlation between the original predictor variable and the discriminant function scores.

[5]Extensive interviews with both elementary and secondary teachers over the last ten years indicates that the presence of visitors, student teachers, teacher aids, administrators, or intercoms alerts both teachers and students to surveillance. Such monitoring causes disruptions of normal classroom dynamics resulting in observer/experimenter effects.

Table 1

College Teacher Scenarios

Scenario 1: Immediate Teacher/Antisocial Strategy

You are taking a class from a teacher who seems relaxed, animated, and vocally expressive during class lectures and discussions. Moreover, the teacher smiles frequently, engages in a lot of eye contact and is generally perceived as friendly and approachable. On a number of occasions, the teacher has noticed that you are coming to class unprepared. Unable to ignore your behavior, the teacher finally asserts that you should come prepared "Because I told you to" or "I'll lower your grade if you don't."

Scenario 2: Immediate Teacher/Prosocial Strategy

You are taking a class from a teacher who seems relaxed, animated, and vocally expressive during class lectures and discussions. Moreover, the teacher smiles frequently, engages in a lot of eye contact and is generally perceived as friendly and approachable. On a number of occasions, the teacher has noticed that you are coming to class unprepared. Unable to ignore your behavior, the teacher finally asserts that you should come prepared "Because it will help you later on in life (or with upcoming assignments) or "You'll find it a rewarding and meaningful experience."

Scenario 3: Nonimmediate Teacher/Antisocial Strategy

You are taking a class from a teacher who seems tense, reserved, and vocally unexpressive during class lectures and discussions. Moreover, the teacher seldom smiles, avoids looking directly at students and is generally perceived as remote, aloof or unapproachable. On a number of occasions, the teacher has noticed that you are coming to class unprepared. Unable to ignore your behavior, the teacher finally asserts that you should come prepared "Because I told you to" or "I'll lower your grade if you don't."

Scenario 4: Nonimmediate Teacher/Prosocial Strategy

You are taking a class from a teacher who seems tense, reserved, and vocally unexpressive during class lectures and discussions. Moreover, the teacher seldom smiles, avoids looking directly at students and is generally perceived as remote, aloof or unapproachable. On a number of occasions, the teacher has noticed that you are coming to class unprepared. Unable to ignore your behavior, the teacher finally asserts that you should come prepared "Because it will help you later on in life (or with upcoming assignments) or "You'll find it a rewarding and meaningful experience."